

GABRIELLE GIFFORDS  
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# Congress of the United States

## House of Representatives

### Washington, DC 20515

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SUBCOMMITTEE ON ENERGY  
AND ENVIRONMENT

FOREIGN AFFAIRS

SUBCOMMITTEE ON  
THE WESTERN HEMISPHERE

## Biography for Thomas N. Hansen

Vice President, Environmental Services, Conservation and Renewable Energy, Tucson Electric Power

### Education:

Lehigh University, BSEE, 1971

Major, Electrical Engineering/ Computers, Hardware and Software Design; Minor, Physics

Stanford University, MSEE, 1972

Major, Electrical Engineering/Computers, Hardware and Software Design, Laser Design, Inertial Navigation, Design; Minor, Geophysics

### Work Experience:

#### Tucson Electric Power Company - 1992 - Present

Vice President, Power Production - 1992 - 1994

Vice President, Technical Adviser - 1994 - 2006

Vice President, Environmental Services, Conservation and Renewable Energy - 2006 - Present

- Guiding the development of the Renewable Generation Portfolio of Tucson Electric Power, including 11 MW of renewable generation capacity of which 6 MW is solar. Currently Arizona's largest single utility renewable generation fleet.

#### Alamito Company/Century Power - 1984 - 1992

Superintendent of Operations, Springerville Generating Station -1984 - 1986

Plant Manager, Springerville Generating Station - 1987 - 1988

Vice President, Operations, Springerville Generating Station - 1989 - 1992

#### Bechtel Power Col'DOration- 1972 - 1984

Senior Field Engineer, Navajo Generating Station - 1972 - 1976

Start-Up Engineer, Cholla Generating Station - 1977

Assistant Electrical Superintendent, Coronado Generating Station - 1976 - 1980

Electrical Superintendent, Palo Verde Nuclear Generating Station - 1981

Project Field Engineer, Springerville Generating Station - 1981- 1984

- Career includes the design, construction, operation or management of over 10,000 MW of electric generation capacity in the western United States.

### Affiliations Present and Past:

EEl Renewable Energy Working Group - Chair - 2 yrs.  
Arizona Governor's Renewable Energy Working Group - 1 yr.  
International Energy Agency Solar Energy Task 8 Committee Member and U.S. Representative - 2 yrs.  
(WGA Clean and Diversified Energy Advisory Committee Solar Subcommittee Member - 1 yr.)  
(Utility Photovoltaic Group Board -Member, 3 yrs.)

### **Professional Licenses:**

Registered Mechanical Engineer - Arizona  
Registered Electrical Engineer -Arizona, California

### **Publications:**

- ***Energy Pay-Back and Life Cycle CO2 Emissions of the BOB in an Optimized 3.5 M'W PV Installation.***" J.E. Mason, V.M. Fthenakis, T. Hansen and H.C. Kim. Progress in Photovoltaics, May 6, 2005.
- ***"Photovoltaic Power Plant Experience at Tucson Electric Power."*** Larry Moore, Hal Post, Tom Hansen and Terry Mysak. 2005 ASME International Mechanical Engineering Congress, November 2005. IMECE2005-82328.
- ***"Environmental Portfolio Standard Meeting Solar Electric Generation Goals: The Utility View."*** Presented October 25, 2002 in Phoenix, Arizona at the Arizona Corporation Commission.
- ***"More Solar for Less \$."*** Presented October 3, 2003 in Scottsdale, Arizona at UPEX 2003: Solar Power Experience Conference.
- ***"The Systems Driven Approach to Solar Energy: A Real World Experience."*** Presented October 15, 2003 in Albuquerque, New Mexico at the Sandia Laboratories Solar Power Conference.
- ***"The Promise of Utility Scale Solar Photovoltaic (PV) Distributed Generation."*** Presented March 2, 2004 in Las Vegas, Nevada at the Power-Gen Renewable Energy 2004 Conference.
- ***"Utility Scale Photovoltaic (USSpv) Distributed Generation."*** Presented April 5, 2004 in Phoenix, Arizona at the Arizona Corporation Commission.
- ***"Springerville Generating Station Solar System: A Case Study."*** Presented October 19" 2004 in San Francisco, California at the Solar 2004 Conference.
- ***"Utility Scale Photovoltaic Generation: Broccoli for Utilities – A New Generation Financing Paradigm."*** Presented October 27, 2005 in Phoenix, Arizona at the Arizona Corporation Commission.
- ***"Utility Scale Photovoltaic Generation: A New Opportunity."*** Presented November 8,2005 in Denver, Colorado at the Rocky Mountain Electric League Fall Conference.